

Remarks

The drawing objections and related Section 112(1) rejections ignore the plain language in Applicant's specification and further contradict the Examiner's own statements, in the Final Office Action, that the limitations upon which the rejections are based (a mixer that separates audio and video signals) "would be obvious" to one of skill in the art. The objections and Section 112(1) rejections are accordingly untenable. The prior art rejections are also improper because the Office Action has not shown explicit correspondence to the limitations upon which the Section 112(1) are (erroneously) based, in apparently relying upon the assertion that such limitations are not supported. The prior art rejections are further improper because the Examiner has erroneously interpreted the timing and function of the cited amplitude corrections, which occur after (rather than during) modulation, and because the primary reference accordingly teaches away from the proposed combination. The following addresses these matters in greater detail.

The Final Office Action dated October 6, 2008 indicated that: claims 6 and 8 are allowed; claims 1-5 and 7 stand rejected under 35 U.S.C. § 112(1); claim 10 stands rejected under 35 U.S.C. § 103(a) over the Ichihara reference (U.S. Patent No. 7,206,360); claims 1-5 stand rejected under 35 U.S.C. § 103(a) over the Ichihara reference in view of the Birleson reference (U.S. Patent No. 6,177,964); claim 7 stands rejected under 35 U.S.C. § 103(a) over the Ichihara reference in view of the Birleson reference and in further view of the Leenaert reference (U.S. Patent No. 6,999,745); claim 9 stands rejected under 35 U.S.C. § 103(a) over the Ichihara reference in view of the Birleson reference and further in view of the Olson reference (U.S. Patent No. 7,050,778); and the drawings stand objected to. Applicant traverses all of the rejections and, unless explicitly stated by the Applicant, does not acquiesce to any objection, rejection or averment made in the Office Action.

In response to the objection to the drawings (and as relevant to the Section 112(1) rejections discussed below), Applicant submits that a mixer system that provides the audio signal from the video signal are illustrated in the Figures in a manner that is clear and further consistent with a basic understanding level of one of skill in the art. Moreover, this is also consistent with the Examiner's own indication that "it is noted that when processing a video signal which comprises image data and audio data, one skilled in the art would recognize that these two components would be separated by a mixer..." (see

page 5 of the Final Office Action). Accordingly, the Office Action has directly contradicted itself by first asserting that the described mixer circuit cannot perform separation functions (in the drawing objections and Section 112(1) rejections), and later asserting that such functions are not only performed by a mixer, but that such functions are obvious to one of skill in the art (in the Section 103 rejection). Based upon this contradiction, the assertion that the exemplary mixer circuits shown in the drawings do not support the claims is untenable. Applicant therefore incorporates the responses of record regarding these objections, and has attempted to further assist the Examiner's understanding by addressing the questions posed in the Advisory Action with the following discussion.

Regarding the Examiner's questions about which function would separate audio and video signals, Applicant again refers the Examiner back to the Office Action itself, in which the Examiner has indicated that mixers perform these functions. Applicant further refers the Examiner to exemplary paragraph 0041 of Applicant's specification (the U.S.P.T.O.'s published version), which describes using two mixers/multipliers with a local oscillator signal, followed by one or more polyphase filters as an exemplary manner in which to provide such outputs. Paragraph 0041 also describes alternate embodiments directed to high-suppression using a full complex mixer. That is, the mixer circuits as represented in the Figures, using an oscillatory signal, translate an input signal into a wanted and an unwanted (*i.e.*, video) signal, that can be suppressed using, for example, a polyphase filter. This is further consistent with the Examiner's own discussion at page 5 of the Office Action, and well-understood operation of frequency translation (and, *e.g.*, subsequent use of polyphase filters). Accordingly, the Examiner's assertion at page 3 of the Advisory Action that the signal would need to be split "before inputting to the mixers" is contrary to the Examiner's own indication and to Applicant's specification, as it is the mixers that generate the wanted and unwanted signals. Applicant fails to understand what further explanation the Examiner would desire. This is further consistent with the discussion of various related implementations of the claimed invention at paragraph 0039, with different audio and video type applications. Applicant submits that the objections to the drawings are thus improper and should be removed.

Should the Examiner require further clarification, Applicant invites a telephone call to the undersigned.

In an effort to facilitate the Examiner's understanding of the claims as may relate to the apparent confusion as discussed above, Applicant has amended the claims to separate limitations and add punctuation for readability. Applicant believes that the scope of the claims is generally consistent with that of the claims, prior to amendment.

Applicant respectfully traverses the rejection of claims 1-5 and 7 under Section 112(1). As explained at length above with reference to Applicant's originally-filed specification, Applicant respectfully submits that the written description requirement has been more than satisfied by way of explicit language and illustrations in Applicant's originally-filed specification, and as consistent with the Examiner's indications of what one of skill in the art would understand. Applicant further notes that word-for-word correspondence is not required by the M.P.E.P. or relevant law, and maintains that the figures, together with the discussion in the specification (*see, e.g.*, paragraphs 0039-0041), fully support the claim limitations. Applicant respectfully submits that the rejection must be withdrawn.

Applicant respectfully traverses the Section 103 rejections because the cited Ichihara reference, upon which all rejections rely, does not disclose making amplitude corrections during frequency translation as asserted. While the Office Action has not cited any supporting discussion in the Ichihara reference, it appears that the cited amplitude detector carries out amplitude correction after demodulation (and after further filtering at 5 and 6), rather than during any frequency translation. In fact, the purpose of the Ichihara reference teaches away from correction during demodulation, instead requiring that the amplitude deviation correction be carried out "after orthogonal demodulation" (see column 1 in the "Field of Invention"). Referring to the discussion of FIG. 1 at column 4:61 - 5:26, the cited rectifiers (51, 52) and correction (19) occur after demodulation (at 4) and are carried out on the respective I and Q signals (*i.e.*, after the signals have been filtered). Accordingly, the cited combination of references does not disclose claim limitations directed to making amplitude corrections during frequency translating, much less doing so with audio and video output signals.

Applicant submits that the Section 103 rejections are also improper because the Office Action has provided no reference that teaches or suggests outputting video and audio signals as claimed. Specifically, the Office Action has relied upon the Examiner's opinion of what "one skilled in the art would recognize," without citing any reference that supports this opinion or describes how such functions would be performed. None of the references appear to disclose, teach or suggest limitations directed to making amplitude corrections during frequency translation, in connection with providing a wanted (non-image) signal and wanted signal as claimed.

The Section 103 rejections are further improper because the cited Ichihara reference teaches away from making amplitude corrections during frequency translation, and thus teaches away from the proposed combination. As consistent with M.P.E.P. § 2143.01 and *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (U.S. 2007), where a main reference teaches away from the asserted combination of teachings (and accordingly undermines the purpose or operation of the main reference), there is no motivation. As discussed above, the stated purpose of the Ichihara reference is to carry out frequency correction "after orthogonal demodulation." Accordingly, there is no motivation to modify the Ichihara reference to carry out correction during frequency translation because such a modification would undermine this purpose.

Applicant further traverses the Section 103 rejections of claims 1-5, 7 and 9 because the Examiner has failed to provide any explanation as to how the Ichihara reference would somehow be modified to include the processing of video data, and no explanation as to how the reference could function accordingly. In short, the Ichihara reference is directed to processing audio data and has no bearing upon processing video data, much less upon the claim limitations directed to generating separate signals from combined audio/video data. The Office Action has provided no explanation as to how Ichihara would be modified to include several frequency stages as suggested, or as to how Ichihara could accordingly function.

In view of the above, the Office Action has accordingly failed to establish a *prima facie* case of obviousness and the Section 103 rejections should be removed.

As claim 10 has been cancelled, the rejection under U.S.C. § 103(a) is inapplicable.

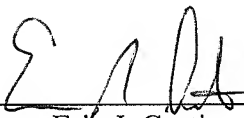
Applicant believes that new claim 11 is also allowable over the cited references for reasons including those stated above, and further because the cited references fail to teach or suggest limitations directed to a polyphase filter connected to an amplifier circuit of a mixer-circuit, and configured with the mixer-circuit to suppress video data. For instance, as discussed above the Ichihara reference amplifies signals after they have been filtered, specifically to correct deviation between I and Q signals (see, e.g., column 3:42-45 and the Title of the Ichihara reference). Claim 2 has been amended to include similar limitations. Support for these limitations may be found throughout the specification, with exemplary embodiments shown in FIG. 4 and described at paragraphs 0039-0041.

In view of the remarks above, Applicant believes that each of the rejections/objections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063.

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